

8 wherein the lean NOx catalyst is disposed upstream of the oxidation
9 catalyst and wherein the platinum is present in the lean NOx catalyst at a loading
10 of $\leq 30\text{g/ft}^3$.

1 10. (Newly Added) An engine according to claim 9, wherein the
2 lean NOx catalyst has an activity sufficient to provide a ratio of % NOx conversion
3 to % hydrocarbon conversion of at least 0.2 as measured at a temperature of
4 230°C , a space velocity of 25000hr^{-1} and a hydrocarbon:NOx input ratio of 3:1
5 counting the hydrocarbon as equivalent propane.

b1 1 11. (Newly Added) An engine according to claim 9, wherein the
2 oxidation catalyst has an activity sufficient to provide a % hydrocarbon conversion
3 of greater than 80% and a % carbon monoxide conversion of greater than 70% as
4 measured at a temperature of 230°C , a space velocity of 25000hr^{-1} and a
5 hydrocarbon:NOx input ratio of 3:1 counting the hydrocarbon as equivalent
6 propane.

1 12. (Newly Added) An engine according to claim 9, wherein the
2 lean NOx catalyst further comprises an alkaline earth metal.

1 13. (Newly Added) An engine according to claim 9, wherein the
2 oxidation catalyst further comprises a base metal.

1 14. (Newly Added) An engine according to claim 9, wherein the
2 oxidation catalyst PGM is platinum.

1 15. (Newly Added) An engine according to claim 9, wherein the
2 oxidation catalyst PGM loading is about 100g/ft^3 .

1 16. (Newly Added) An engine according to claim 9, wherein the
2 oxidation catalyst or the lean NOx catalyst further comprise alumina, a zeolite,
3 ceria or zirconia.

1 17. (Newly Added) An engine according to claim 9, wherein the
2 volume of a substrate coated with the lean NOx catalyst is at least 150% that of the
3 oxidation catalyst.

1 18. (Newly Added) An engine according to claim 9, wherein the
2 lean NOx catalyst is coated on two catalyst substrates arranged in parallel.

1 19. (Newly Added) An engine according to claim 9, further
2 comprising means for injecting hydrocarbon fuel into the exhaust upstream of the
3 platinum lean NOx catalyst.

1 20. (Newly Added) An engine according to claim 9, wherein the
2 engine is a diesel engine, a lean burn gasoline engine or a direct injection gasoline
3 engine.

1 21. (Newly Added) A process for the control of emissions from a
2 lean-burn internal combustion engine, which process comprising:

3 passing exhaust gases from the engine over a lean NOx catalyst
4 comprising platinum to reduce NOx to N₂; and

5 passing the product gases exiting from the lean NOx catalyst over an
6 oxidation catalyst comprising a platinum group metal (PGM) to oxidize
7 hydrocarbons and carbon monoxide,

8 wherein the platinum is present in the lean NOx catalyst at a loading
9 of $\leq 30\text{g/ft}^3$.

1 22. (Newly Added) A process according to claim 21, wherein the
2 lean NOx catalyst has an activity sufficient to provide a ratio of % NOx conversion
3 to % hydrocarbon conversion of at least 0.2 as measured at a temperature of
4 230°C, a space velocity of 25000hr⁻¹ and a hydrocarbon:NOx input ratio of 3:1
5 counting the hydrocarbon as equivalent propane.

1 23. (Newly Added) A process according to claim 21, wherein the
2 oxidation catalyst has an activity sufficient to provide a % hydrocarbon conversion
3 of greater than 80% and a % carbon monoxide conversion of greater than 70% as
4 measured at a temperature of 230°C, a space velocity of 25000hr⁻¹ and a
5 hydrocarbon:NOx input ratio of 3:1 counting the hydrocarbon as equivalent
6 propane.

1 24. (Newly Added) A process according to claim 21, wherein the
2 lean NOx catalyst further comprises an alkaline earth metal.

1 25. (Newly Added) A process according to claim 21, wherein the
2 oxidation catalyst further comprises a base metal.

1 26. (Newly Added) A process according to claim 21, wherein the
2 oxidation catalyst PGM is platinum.

1 27. (Newly Added) A process according to claim 21, wherein the
2 oxidation catalyst PGM loading is about 100g/ft³.

1 28. (Newly Added) A process according to claim 21, wherein the
2 oxidation catalyst or the lean NOx catalyst further comprises alumina, a zeolite,
3 ceria or zirconia.

1 29. (Newly Added) A process according to claim 21, wherein the
2 gases are passed over the lean NOx catalyst system at a space velocity below
3 40000hr⁻¹.

1 30. (Newly Added) A process according to claim 21, wherein the
2 gases are passed over the oxidation catalyst at a space velocity of 40000-80000hr⁻¹.

1 31. (Newly Added) A process according to claim 21, wherein the
2 volume of a substrate coated with the lean NOx catalyst is at least 150% that of the
3 oxidation catalyst.

1 32. (Newly Added) A process according to claim 21, wherein the
2 lean NO_x catalyst is coated on two catalyst substrates arranged in parallel.

1 33. (Newly Added) A process according to claim 21 further
2 comprising introducing additional hydrocarbon fuel into the exhaust gas before the
3 exhaust gas contacts the lean NO_x catalyst.
